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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,212	12/05/2003	Gregory T. Huber	S9025.0238	2475

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EXAMINER	
SHOSHO, CALLIE E	

ART UNIT	PAPER NUMBER
1714	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/730,212

Applicant(s)

HUBER ET AL.

Examiner

Callie E. Shosho

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. All outstanding rejections except for those described below are overcome by applicants' amendment filed 11/27/06.

The new grounds of rejection set forth below are necessitated by applicants' amendment and thus, the following action is final.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(a) Claims 1, 12, 14, 15, and 16 each recite improper Markush group. Specifically, each claim has been amended to recite that "R₁ is individually selected from the group consisting of H or CH₃". It is advised that "or" is changed to "and" in the cited phrase in each claim.

(b) Each of claims 4-6 recite the "average molecular weight" of the polymeric dispersant. The scope of each the claims is confusing given that it is not clear what type of average molecular weight is being claimed, i.e. weight average, number average, etc.

It is noted that the above rejection was previously set forth in paragraph 2(a) of the office action mailed 9/11/06.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1-6 and 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartman et al. (U.S. 5,180,802) in view of Vickers, Jr. et al. (U.S. 6,429,266) and Paulson et al. (U.S. 6,114,430).

The rejection is adequately set forth in paragraph 5 of the office action mailed 9/11/06 and is incorporated here by reference.

6. Claims 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mahmud et al. (U.S. 5,747,562) in view of Hartman et al. (U.S. 5,180,802), Vickers, Jr. et al. (U.S. 6,429,266) and either Paulson et al. (U.S. 6,114,430) or Walker (U.S. 5,576,416).

The rejection is adequately set forth in paragraph 5 of the office action mailed 9/11/06 and is incorporated here by reference.

Response to Arguments regarding 35 USC 112, 2nd paragraph rejection of record

7. Applicants' arguments have been fully considered but they are not persuasive.

Specifically, applicants argue that one skilled in the art would be well aware from reading the application what average molecular weight is being referenced.

However, given that there is no disclosure in the present specification regarding the average molecular weight except the explicit recitation of the average molecular weight, i.e. no

disclosure regarding how the molecular weight is measured, it is not clear how one skilled in the art would be able to determine the type of average molecular weight being claimed. Clarification is requested.

Applicants also note that other patents including U.S. 4,496,686 cited in the present specification and Vickers, Jr. et al. cited by the examiner also simply refer to “average molecular weight”.

However, “it is immaterial whether similar claims have been allowed in another application”, *In re Giolito and Hofmann*, 188 USPQ 645. The claims allowed in other applications having no direct bearing on the present claims. In the present application, it is the examiner’s position that the scope of the claims remains confusing given that it is not clear what type of average molecular weight is being claimed.

Response to Arguments regarding 35 USC 103 rejection of record

8. Applicants’ arguments regarding Walker (U.S. 5,576,416) have been considered but they are moot in view of the discontinuation of the use of this reference against the present claims.

9. Applicants’ arguments filed 11/27/06 have been fully considered but, with the exception of arguments relating to Walker, they are not persuasive.

Applicants argue that the choice of reaction product that reacts polycarboxylic acid with monoamine is but one of four reaction products disclosed by Hartman et al. and that the choice of each of the specific polycarboxylic acid, i.e. trimellitic anhydride, and the specific

monoamine, i.e. polyoxyalkylene amine, is but one of large list of polycarboxylic acids and monoamines disclosed by Hartman et al.

However, it is noted that the choice of reaction product is only one of four which is not a large list from which to choose the presently claimed type of reaction. Further, while Hartman et al. do disclose the use of polycarboxylic acids and monoamines other than those presently claimed, the fact remains that Hartman et al. do explicitly disclose the use of trimellitic anhydride, which is identical to the anhydride utilized in the present invention to form the presently claimed compound, and polyoxyethylene amine or polyoxypropylene amine, i.e. to be referred to as polyoxyalkylene amine, which broadly encompasses polyoxyalkylene amine utilized in the present invention to form the presently claimed compound, and thus, it would have been obvious to one of ordinary skill in the art to choose any polycarboxylic acid or monoamine in Hartman et al., including trimellitic anhydride and polyoxyalkylene amine, as presently claimed.

While there is no disclosure of specific polyoxyalkylene amine needed to form compound of the present claims, this is why Hartman et al. is used in combination with Paulson et al.

Applicants argue that Paulson et al. is not a relevant reference against the present claims given the large number of compounds disclosed in the reference. Further, applicants argue that there is no motivation to combine Hartman et al. with Paulson et al.

However, it is noted that Hartman et al., which is drawn to coating composition, disclose reaction product of polycarboxylic acid, which Hartman et al. disclose includes trimellitic anhydride, and polyoxyalkylene amine, however, there is no disclosure of specific polyoxyalkylene amine that would react with the polycarboxylic acid to form presently claimed

compound. Paulson et al., which is drawn to paint composition that functions as a protective or decorative coating, disclose the use of compound obtained from polycarboxylic acid and diamine and further disclose that the polycarboxylic acid is further reacted with polyoxyalkylene amine known under the tradename Jeffamine M-2005 wherein such polyoxyalkylene amine is utilized in order to produce lower molecular weight product with reduced melt temperature and increased water-solubility. It is noted, as disclosed by Vickers, Jr. et al., that Jeffamine M-2005 is identical to polyoxyalkylene amine known under the tradename XTJ-507 which is identical to the polyoxyalkylene amine utilized in the present invention.

In response to applicants' arguments, it is noted that the choice of Jeffamine M-2005 is not from amongst a large number of monoamines but is one of only 4 monoamines disclosed by Paulson et al. Further, it is the examiner's position that there is motivation to combine Hartman et al. with Paulson et al. given that Paulson et al. disclose the use of specific types of polyoxyalkylene amine, broadly disclosed by Hartman et al., that are suitable for reaction with polycarboxylic acids as well as disclose motivation for using such polyoxyalkylene amine.

Thus, given that Paulson et al. is drawn to same field of endeavor as Hartman et al., i.e. coating composition, given that Paulson et al. disclose specific type of monoamine for reaction with polycarboxylic acid that is broadly disclosed by Hartman et al., and given that Paulson et al. disclose motivation for using such monoamine, it is the examiner's position that it would have been obvious to one of ordinary skill in the art to use such specific type of polyoxyalkylene amine as the polyoxyalkylene amine in the reaction product of Hartman et al. in order to produce compound with lower molecular weight product that has reduced melt temperature and increased water-solubility, and thereby arrive at the claimed invention.

Applicants also argue that Vickers, Jr. et al. is not a relevant reference against the present claims given that this reference is drawn to cementitious composition. However, it is noted that Vickers, Jr. et al. is only used to teach the meaning of a tradename disclosed by Paulson et al. Given that Vickers, Jr. et al. is used as teaching reference, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, and in combination with the primary reference, discloses the presently claimed invention.

Applicants also argue that the cited prior art is not relevant against the present claims given that there is no disclosure in Hartman et al. or Paulson et al. that the compound is a polymeric dispersant as presently claimed and that the limitation that the compound functions as a dispersant cannot be ignored in the present claims.

It is noted that given that combination of Hartman et al. with Paulson et al. discloses reacting 1,2,4-benzenetricarboxylic acid with polyoxyalkylene amine identical to that presently claimed and utilized in the present invention and thus, it is clear that the resulting compound would intrinsically possess structure as presently claimed. It is agreed that there is no disclosure in Hartman et al. or Paulson et al. that the compound is a polymeric dispersant as required in present claim 1 or claim 12, energy curable printing ink polymeric dispersant additive as required in present claim 14, viscosity reducing printing ink polymeric dispersant additive as required in present claim 15, or gloss increasing energy curable printing ink polymeric dispersant additive as required in present claim 16.

However, on the one hand, give that combination of Hartman et al. with Paulson et al. or Walker discloses reacting 1,2,4-benzenetricarboxylic acid with polyoxyalkylene amine identical to that presently claimed, it is clear that such product would intrinsically function as polymeric dispersant, energy curable printing ink polymeric dispersant additive, viscosity reducing printing ink polymeric dispersant additive, or gloss increasing energy curable printing ink polymeric dispersant additive as presently claimed. The courts have held that “a compound and all its properties are mutually inseparable”, *In re Papesch*, 315F.2d 381, 137 USPQ 42, 51 (CCPA 1963). Further, attention is drawn to MPEP 2112.01, which states that “products of identical chemical composition can not have mutually exclusive properties. A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present.”, *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Thus, given that the combination of Hartman et al. with Paulson et al. disclose compound as presently claimed, it is clear that the compound would intrinsically function as dispersant as presently claimed.

On the other hand, attention is drawn to MPEP 2111.02 that discloses that statements in the preamble reciting the purpose or intended use of the claimed invention must be evaluated to determine whether the purpose or intended use results in a structural difference between the claimed invention and the prior art. Only if such structural difference exists, does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim.

It is the examiner's position that the purpose or intended use recited in the present claims does not result in a structural difference between the presently claimed compound and the prior

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art compound and further that the prior art structure which is identical to that set forth in the present claims is capable of performing the recited purpose or intended use.

Thus, the examiner is not ignoring the claim preamble but rather stating that although there is no explicit disclosure in the prior art that the compound functions as a dispersant, given that the prior art discloses compound as presently claimed, it is clear that such compound is capable of performing the recited purpose or intended use, i.e. dispersant.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Callie E. Shosho
Primary Examiner
Art Unit 1714

CS
2/18/07